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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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BY

Ms. LaDonna Castañuela
Office of the Chief Clerk/MC-105
Texas Commission on Environmental Quality
12100 Park 35 Circle, Building F
Austin, Texas 78753

Re: Jewell Alt and Oene Keuning, dba O-Kee Dairy
Draft Permit for Major Amendment
TPDES Permit No. WQ0004108000
Public Comment
Request for Public Meeting

Dear Ms. Castañuela:

The City of Waco ("City"), the mailing address of which is P.O. Box 2570, Waco, Texas 76702-2570, phone number (254) 750-5640, fax number (254) 750-5880, hereby submits the following public comments and request for public meeting, on behalf of the City and as *parens patriae* on behalf of its citizens. Communications regarding these matters may be made to the City's retained legal counsel, Jackson Battle, Brown McCarroll, L.L.P., Suite 1400, 111 Congress Avenue, Austin, Texas 78701, phone number (512) 479-9757, fax number (512) 479-1101.

PUBLIC COMMENTS.

The TCEQ should not issue the proposed amended Permit No. 4108 to Jewell Alt and Oene Keuning (hereinafter referred to by the name under which they are doing business, "O-Kee Dairy"), because to do so with no conditions other than those in the draft permit and without compliance with the substantive and procedural requirements of state and federal law that are identified herein would be illegal, as well as damaging to the North Bosque River, Lake Waco, the City's drinking water supply, and the health and welfare of its citizens. The specific legal requirements that would be violated by the issuance of this permit follow.

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I. The draft permit fails to comply with the TMDLs for phosphorus in the North Bosque River or otherwise ensure attainment of the water quality standards for phosphorus in the river.

1. In the first place, O-Kee Dairy is a "new source" that has not demonstrated compliance with the specific requirements of 40 CFR § 122.4(i) as required by 30 TAC § 305.538.

Strictly as a technical matter of law, O-Kee Dairy is a "new source" within the literal terms of the state and federal definitions in 40 CFR § 122.2 and 30 TAC § 305.2(24), because construction of all sources at the site commenced after the first promulgation of the federal new source standards of performance for CAFOs on February 14, 1974. *See* 40 CFR § 412.15; 39 Fed. Reg. 5706 (February 14, 1974). The initial construction and operation of a dairy at the site commenced in 1992.

Beyond the matter of law that the O-Kee Dairy has been a "new source" ever since it was constructed in 1992, the substantial expansion that it is seeking to have authorized under this permit is reason enough that the very specific water quality attainment demonstration required for a new source should be applied to it. If it is allowed to expand from 690 to 999 cows, its manure and wastewater production will, accordingly, increase 45%. Even if O-Kee Dairy were not already a "new source," the 45% expansion that it is seeking authorization to undertake should make it a new source under the criteria for new source determination in 40 CFR § 122.29(b) and 30 TAC § 305.534(b), in that the resulting increase of the pollutant load is generated by processes that are "substantially independent" of existing sources – that is, the 309 additional cows that produce the additional manure and wastewater are sources that are quite independent of the existing 690 cows. Indeed, every one of these new cows is its own independent source of approximately 150 pounds of wet manure per day. By adding 309 new cows to the dairy, it will be increasing the amount of wet manure produced daily by over 23 tons (that is, by approximately 8,460 tons per year).

The expansions of the cow pens, milk barn, free stalls, and/or other animal confinement areas to accommodate the 309 additional cows constitute "new sources" as the term is defined and explained in 40 CFR §§ 122.2, 122.29(a), (b) and 30 TAC §§ 305.2(24), 305.534(a), (b), as does the construction of the new retention control structure, RCS #2, and the increase of land application acreage from 261 to 285.4 acres.

All of these facts and circumstances, separately and collectively, add up to the need to classify O-Kee Dairy as a "new source" for purposes of holding it to the demonstration required by 40 CFR § 122.4(i):

- that pollutants load allocations have been performed for all pollutants causing violations of the state water quality standards;

- that there are sufficient remaining pollutant load allocations to allow for the discharge and still attain water quality standards; and

- that all existing dischargers into the segment are subject to compliance schedules designed to bring the segment into compliance with the applicable water quality standards.

The TCEQ may have made a global "load allocation" of sorts for soluble phosphorus loadings into Segments 1226 and 1255 of the North Bosque River when it accepted EPA's interpretation of its TMDLs for phosphorus in these two river segments. (*See* Table 1 in Mr. Cooke's 12/03/01 letter to Mr. Saitas, a copy of which is attached hereto as Attachment 1.) There has been nothing even approaching, however, a demonstration that there are sufficient remaining pollutant load allocations of phosphorus discharged from CAFOs into these impaired segments to allow for the discharges from the O-Kee Dairy expansion or any demonstration that the existing dischargers of phosphorus into the river are subject to compliance schedules. Most significantly to the present circumstance, as recognized by EPA in Footnote 2 to Table 1 in Mr. Cooke's 12/03/01 letter, the very general load allocation for phosphorus discharges performed by the TCEQ in the two TMDLs *did not include any allocation whatsoever for discharges from CAFO wastewater lagoons.* Also, no phosphorus load allocations were reserved for future CAFO expansions; all "Future Growth" was reserved for the municipal wastewater treatment plants discharging into the river.

2. Even if the expanded O-Kee Dairy is not a "new source," the draft permit issued to it fails to meet the most basic requirement of Clean Water Act § 301(b)(1)(C), as implemented in 40 CFR §§ 122.4(a), (d) and 122.44(d), that attainment of the state water quality standards be ensured.

The several reasons for the failure of the draft permit to achieve the water quality standards for phosphorus are described below in subsections (a) – (d).

(a) The draft permit fails to require what was modeled in the TMDLs.

The key modeling assumptions for CAFOs in the TMDLs were as follows:

- watershed-wide waste production was limited to that from 40,450 dairy cows (the *actual* cow numbers in the mid-1990s);
- 50% of the solid manure (equating to 38% of the total manure and 89% of the solid collectible manure) from those 40,450 animals would be removed from the watershed;
- the amount of phosphorus in the animals' diet would be reduced to 0.4%;
- the phosphorus application rate would not exceed the "agronomic rate" on all fields in the watershed;
- the initial soil phosphorus concentrations in existing waste application fields were set at 200 ppm and, if the "agronomic" P application rate was intended to not exceed the crop removal rate, the soil P concentration in the existing fields would not climb above 200 ppm over time.

- the initial soil phosphorus concentrations in new waste application fields were set at 60 ppm and, if the "agronomic" P application rate was intended to not exceed the crop removal rate, the soil P concentration in any new field would not climb above 60 ppm over time.

The draft permit for O-Kee Dairy ignores all of these conditions that were modeled. In fact, the CAFOs in the North Bosque River watershed are requesting that 66,224 cows be authorized in the permit applications that are currently pending before the TCEQ. If all of these requested number of cows are authorized, this would result in a 64% increase over the number of cows modeled in the TMDL.

The O-Kee draft permit allows a 45% increase in cow numbers without any offsetting decrease in the number of cows at CAFOs permitted elsewhere in the watershed. It contains no limits whatsoever on the amount of phosphorus in the animal feed. As discussed later in these comments, it requires no removal of manure from the watershed.

The draft permit allows phosphorus to be applied (via wastewater and/or manure application) at rates substantially beyond the "agronomic" phosphorus removal ("uptake") rate on the six LMUs. This will cause the phosphorus concentrations in these fields to steadily increase (up to as high as 500 ppm), leading to increased phosphorus in the runoff from those fields.

Most significantly, the draft permit allows phosphorus to be applied to "new" third-party fields well past the 60 ppm P concentration level modeled for any new field. And, up to a phosphorus concentration of 150 ppm, it allows the phosphorus application rate to greatly exceed the "agronomic" rate modeled. According to the draft permit, the N rate may be used in applying manure to a field with a concentration of up to 50 ppm P, while a 2xP application rate may be used for manure application to third-party fields with P concentrations from 51-150 ppm.

Moreover, the phosphorus application rates specified in the permit for third-party fields may end up being virtually meaningless anyway. Without any requirement for initial, pre-application sampling and analysis of phosphorus concentrations, and no sampling required for a year, by the time a sample from a third-party field is analyzed, it may well already be past the 50 ppm and 150 ppm rate application points and, indeed, past the 200 ppm cutoff point.

Probably the most basic objection to this draft permit is that, by not requiring a NUP with a phosphorus *reduction* component until phosphorus concentrations in an LMU exceed 500 ppm [*See* Part VII.A.8(c)(4)], and by allowing phosphorus concentrations off-site in the watershed to build up to 200 ppm or higher, resulting in very substantial increases in phosphorus runoff from both on and off-site fields, this permit and any like it will work completely at cross purposes to any possible attainment of the TMDLs and water quality standards.

(b) **The draft permit fails to implement in any way the TCEQ's commitment in its Implementation Plan for Phosphorus in the North Bosque River Watershed to facilitate establishment of commercial composting facilities in order to achieve the basic goal of the TMDLs "to remove from the North Bosque River watershed approximately 50% of the manure produced by dairies, and other facilities that manage large amounts of animal waste, within the watershed." (Implementation Plan, pp. 12-14)**

In order to be consistent with this commitment in the Implementation Plan (based on the modeled haul-out of 50% of all *solid* manure produced by the number of confined cows existing in the watershed in the mid-1990s), the permit would have to require O-Kee Dairy to haul out of the watershed well over 100% of the *collectible* manure produced by 999 cows, an obvious impossibility.

Instead, this permit purports to attain the state water quality standards for phosphorus by relying on NMPs and CNMPs (both of which were described in the Implementation Plan as *additional, not substitute*, measures necessary for attainment of the TMDLs) and on application of manure to third-party fields (which works as a *dis*incentive for a dairy CAFO to transport its waste to a compost facility or take it out of the watershed).

(c) **By allowing all of the collectible manure from O-Kee Dairy's 999 dairy cattle to be applied to third-party fields in the watershed, the Executive Director is drastically *increasing* the amount of phosphorus that will run off into the impaired river segments, not decreasing it.**

Under O-Kee Dairy's existing permit and the incorporated provisions of the 1999 version of the Subchapter B rules, a substantial amount of the collectible manure from its 690 cows would, as a practical matter, have to have gone to a composting facility or out of the watershed.

Now, with the open invitation to spread the manure from 999 cows over third-party fields, this would result in thousands of tons of manure (containing nearly 150 tons of phosphorus), over the course of the five-year term of this permit, being spread over more than 300 acres of minimally-regulated third-party fields, at application rates exceeding the agronomic needs of the crops and severely elevating soil phosphorus concentrations. The runoff of tons of phosphorus into the river from these 300 plus acres of waste disposal fields will increase each year and be extremely counterproductive to attainment of the water quality standards for phosphorus in the North Bosque River.

(d) **The Executive Director has provided no technical justification for his assertions that the measures recited in this permit will attain the water quality standards for phosphorus and implement the TMDLs.**

In drafting this and other permits that have been published, the Executive Director effectively has thrown out the window all of the modeling, expertise, public participation, and other work invested over the course of the past ten years to prepare the phosphorus TMDLs and their Implementation Plan and instead resorted to little more than recitation of measures that, in

virtually all instances, are little more than a paraphrase of the Subchapter B rules, which were never intended, nor previously represented by the TCEQ, to be enough to implement the TMDLs or attain water quality in the North Bosque River.

The Executive Director's conclusory statements in the Fact Sheet that the measures will ensure attainment of water quality standards and implement the TMDLs are supported by no modeling or any other technical analysis. No loading studies for the CAFO discharges into the River have been performed using these measures, nor has any load allocation been determined to remain for allocation to O-Kee Dairy. Indeed, all of the technically based requirements for formulation of a TMDL and an Implementation Plan to achieve water quality standards in an impaired receiving water that are contained in the Clean Water Act and in EPA's rules and guidance have been discarded in favor of the same kind of rough "let's try this and see what happens" approach that historically has brought water bodies like the North Bosque River to such sad conditions.

The third-party fields that will, inevitably, be relied on so heavily for waste disposal are not even identified. Neither the CNMP nor the Pollution Prevention Plan ("PPP") is part of the application. The TCEQ's rules do not require the Executive Director to have reviewed these critical documents prior to permitting. Without any access to such information that is vital to assessment of the effects of the BMPs that are at the heart of this draft permit, there is no possible way for the Executive Director to assess the impact on water quality of the issuance of this permit – except to the extent that, as demonstrated herein, all logic indicates that applying the waste produced by 309 more cows to hundreds more acres of land in the North Bosque River watershed can only make matters much worse.

II. The Executive Director has failed to make any "BPJ" determination that the "BCT" standards for the control of pathogens have been met by the limitations imposed on the O-Kee Dairy by this permit.

The United States Court of Appeals for the Second Circuit held in *Waterkeeper Alliance, Inc. v. Environmental Protection Agency*, 399 F.3d 486, 518-19 (2d Cir. 2005), that the federal effluent limitations for CAFOs were deficient for failing to include "best conventional pollutant control technology" ("BCT") based effluent limitations specifically designed to reduce the discharge of pathogens, including fecal coliform bacteria. Since EPA has not yet promulgated national effluent limitations for the pathogens discharged from CAFOs, the Clean Water Act commands the permit issuing authority, in this case the TCEQ, to employ its "best professional judgment" ("BPJ") to set the required technology-based limitations on a case-by-case basis when each permit is issued. *See* Clean Water Act § 402(a)(1)(B); 40 CFR § 125.3(a)(2)(ii)(B).

In the case of the e-coli, fecal coliform, and other bacteria and pathogens that are part of the "conventional" pollutant load discharged from CAFOs, this requires case-by-case consideration of the BCT criteria specified in the Clean Water Act and the federal NPDES rules:

> (d) In setting case-by-case limitations pursuant to § 125.3(c), the permit writer must consider the following factors:
> * * *

> (2) *For BCT requirements:* (i) The reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived;
>
> (ii) The comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources;
>
> (iii) The age of equipment and facilities involved;
>
> (iv) The process employed;
>
> (v) The engineering aspects of the application of various types of control techniques;
>
> (vi) Process changes; and
>
> (vii) Non-water quality environmental impact (including energy requirements).

40 CFR § 125.3(d)(2); Clean Water Act §§ 301(b)(2)(E), 304(b)(4)(B).

The TCEQ has considered none of these factors in evaluating any control technologies applied to O-Kee Dairy to control the bacteria and other pathogens that it discharges. Until it does so, and makes defensible record-based findings accordingly, no discharge permit can be issued to O-Kee Dairy.

III. The Executive Director fails to require any "third-party fields" that will be utilized by O-Kee Dairy for waste application to be identified in the application and fully regulated as LMUs.

Under both the federal and state CAFO rules, what makes land to which manure, litter, or wastewater is applied a "land management unit" ("LMU") (TCEQ rules) or a "land application area" (federal rules) is *control* of the waste application measures. *See* the TCEQ definition of "LMU" at 30 TAC § 321.32(25) and the EPA definition of "land application area" at 40 CFR § 412.2(e).

The draft permit issued to O-Kee Dairy requires it to exert very substantial control over the waste application process at any third-party field on which it might choose to allow its manure or wastewater to be applied. Most significantly, Part VII.A.8(e)(5)(i) of the permit requires that there be a *written contract* between the permittee and the operator of any third-party field that includes the following requirements:

> There must be a written contract between the permittee and the recipient that includes, but is not limited to, the following provisions:
>
> (A) All transferred manure or wastewater shall be beneficially applied to third-party fields identified in the PPP in accordance with the applicable requirements in 30 TAC Chapters 321.36 and 321.40 at an agronomic rate based on soil test phosphorus. * * *

(B) Manure must be incorporated on cultivated fields within forty-eight (48) hours after land application.

(C) Land application rates shall not exceed the nitrogen application rate when soil phosphorus concentration in Zone 1 (0 - 6 inch if incorporated and 0 - 2 or 2 - 6 inch if not incorporated) depth is less than 50 ppm phosphorus.

(D) Land application rates shall not exceed two times the phosphorus crop removal rate when soil phosphorus concentration in Zone 1 (0 - 6 inch if incorporated and 0 - 2 or 2 - 6 inch if not incorporated) depth is between 51 ppm and 150 ppm phosphorus.

(E) Land application rates shall not exceed one times the phosphorus crop removal rate when soil phosphorus concentration in Zone 1 (0 - 6 inch if incorporated and 0 - 2 or 2 - 6 inch if not incorporated) depth is between 151 ppm and 200 ppm phosphorus.

(F) Third-party fields which have had manure or wastewater applied during the preceding year must be sampled within 12 months of any previous application to that field by a certified nutrient management specialist and the samples analyzed in accordance with 30 TAC Chapter 321.36.

(G) A copy of the annual soil analyses shall be provided to the permittee within 60 days of the date the samples were taken.

(H) Temporary storage of manure or sludge is prohibited on third-party fields.

Not only does the permittee have to legally bind an operator of a third-party field to an enforceable contract that contains all such listed waste management provisions, the permit also makes sure that the permittee is motivated to enforce such contractual provisions by providing, in keeping with 30 TAC § 321.42(j), that "[t]he permittee will be subject to enforcement action for violations of the land application requirements on any third-party field under contract." Draft Permit, Part VII.A.8(e)(5)(iii).

It is difficult to imagine what greater control of manure and wastewater management practices on someone else's waste application fields could be exerted by the permittee other than those contained in this permit, short of the permittee actually applying the waste itself, which is clearly not required to constitute "control." Thus, these contractual requirements and legal responsibility on the part of the permittee all add up to a level of control which makes any third-party field that would be used under this permit an LMU, subject to all the requirements that the Subchapter B rules impose on LMUs, including:

- identification of the exact location and boundaries of the land application area in the submitted application and in the permit itself;

- coverage of all waste application to the field within the required NMPs and CNMPs;

- adherence to all requirements for vegetative buffers and filter strips, etc.;
- prohibition of nighttime application of manure or wastewater;
- weekly inspections of all facilities and equipment used for land application of manure and wastewater;
- compliance with all land application recordkeeping and reporting requirements in 40 CFR § 412.37 and 30 TAC § 321.46.

Imposition of the same extent of control measures on "third-party fields" as on LMUs is precisely what should occur. It defies all logic and sound environmental policy to create second-class waste application fields, and to allow manure and wastewater to be applied to such fields throughout the watershed without NMPs, NUPs, CNMPs, and the full panoply of protections applicable to LMUs owned and operated by the permittees. To do otherwise, as this draft permit would allow, will simply, very counterproductively, expand enormously the land area in the watershed on which waste can be applied and from which pollutants will run off into the river, but without the accountability and management tools that existed even before Subchapter B was amended.

IV. This draft permit, and the process by which it was considered, violate the federal Clean Water Act, as interpreted in *Waterkeeper*, by not requiring all technical documents that demonstrate the methods by which the discharge of pollutants will be controlled at the CAFO to be submitted with the application, reviewed by the TCEQ, made available to the public, and incorporated into the permit.

In *Waterkeeper Alliance v. EPA*, 399 F.3d 486, 498-504 (2d Cir. 2005), the court held that the Clean Water Act required nutrient management plans ("NMPs") to be (1) reviewed by the permitting authority before issuing a permit that authorizes land application discharges; (2) included in the NPDES permits; and (3) made available to the public both before any NPDES issues (in order that the public may meaningfully participate in the permitting process) and after (in order for the public to assist in enforcement).

All sections of the federal Clean Water Act cited by the Second Circuit as bases of its opinion apply to states as well as to EPA if the states are administering the NPDES permit program:

- § 402(b)(1)(A), 33 USC § 1342(b)(1)(A). The permitting authority must review NMPs to ensure compliance with effluent limitations.
- § 301(a) and (b), 33 USC § 1311(a) and (b). Effluent limitations must be included in NPDES permits.
- § 502(11), 33 USC § 1362(11). The terms of NMPs are "effluent limitations."
- § 101(e), 33 USC § 1251(e). The public participation requirements apply to any state carrying out the NPDES program.

- § 402(b)(3), 33 USC § 1342(b)(3). Public hearings are required to be made available on permit applications.

Waterkeeper, 399 F.3d at 498-504.

All reasoning applied by the Second Circuit to hold that applicable sections of the Clean Water Act require NMPs to be reviewed by the permitting authority, incorporated into the permit, and made available to the public applies with the same force to the other site-specific technical plans and documented demonstrations of the methods by which the discharge of pollutants will be controlled at CAFOs permitted by the TCEQ, including:

- Comprehensive Nutrient Management Plans ("CNMPs") (in the North Bosque River watershed);
- Nutrient Utilization Plans ("NUPs");
- Pollution Prevention Plans ("PPPs");
- Retention Control Structure ("RCS") management plans (in the North Bosque River watershed);

Just as the NMPs required by the federal CAFO rule were found to be *effluent limitations* by the Second Circuit, so are each of these plans and documents required by Subchapter B "any restriction established by a State [or the Administrator] on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters . . .." Clean Water Act § 502(11), 33 USC § 1362(11).

The Second Circuit's recognition that "the only restrictions actually imposed on land application discharges are those restrictions imposed by the various terms of the nutrient management plan," 399 F.3d at 502, is what caused the court to hold that the terms of the NMPs were effluent limitations that had to be reviewed by the permitting authority and included in any NPDES permit issue.

The State of Texas, however, goes further and imposes restrictions on land application discharges going beyond those in the federally required NMPs. The TCEQ protects against pollutant discharges from CAFOs by requiring, *inter alia*, NUPs (if LMUs are over 200 ppm phosphorous), CNMPs (if within the North Bosque River watershed), PPPs (which identify third-party fields), RCS management plans (in the North Bosque River watershed), additional RCS capacity (in the North Bosque River watershed), demonstration of no significant hydrologic connection between any RCS and water in the state, and additional buffer and filter strip requirements between LMUs and any water in the state.

By adopting these best management practice ("BMP") restrictions on CAFO waste management in order to reduce the discharge of pollutants, the TCEQ has created additional effluent limitations that must be reviewed by the agency, incorporated into the permit, and made available to the public so that it may participate effectively in the permitting and enforcement processes.

According to Clean Water Act § 402(b)(1)(A), state permit programs must ensure compliance with all applicable requirements of Section 301 of the Act, 33 USC 1311, including meeting the BPT, BCT, and BAT limits that were in issue in *Waterkeeper* [§§ 301(b)(1)(A), 301(b)(2)(A), and 301(b)(2)(E)] and achieving "any more stringent limitation, including those necessary to meet water quality standards, . . . established pursuant to any State law or regulations." Clean Water Act § 301(b)(1)(C), 33 USC § 1311(b)(1)(C).

Just as the Second Circuit concluded that EPA could not ensure compliance with an NMP without reviewing it and including it in the permit, TCEQ cannot ensure compliance with the CNMPs, PPPs, RCS capacity requirements and management plans, etc., without TCEQ's reviewing them and including them in the TPDES permits that it issues. The exact same statutory interpretations and legislative policies apply to the Clean Water Act provisions applicable to state permit programs as to those applicable to the federal permit program. The same is true of those Clean Water Act provisions that require public participation in the permitting process. Section 101(e) is expressly applicable to *state* implementation of *state standards*: "Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any *State* under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States." Clean Water Act § 101(e), 33 USC § 1251(e).

Once it is established that these documents must be included with any CAFO permit application and in any permit ultimately issued by the TCEQ, the Clean Water Act is explicit in its requirements that the state must make them available to the public for review prior to issuance of the permit and in order to obtain a public hearing on any contested aspect of them. Clean Water Act §§ 402(b)(3), 402(j), 33 USC §§ 1342(b)(3), 1342(j).

The draft permit for O-Kee Dairy, therefore, must be rescinded, and the technical review phase of the application reopened to require O-Kee Dairy to submit its current Pollution Prevention Plan, its CNMP, its RCS management plan, and any other technical documents missing from its application that would demonstrate how it intends to control the discharge of pollutants from the dairy. Then the Executive Director must make all these documents available to the public, review them, and, if they are ultimately approved, incorporate them into the next draft permit, if any, for O-Kee Dairy.

V. The NMP and other parts of the permit application submitted by the O-Kee Dairy are replete with errors and deficiencies that make invalid the permit that incorporates it.

These errors and deficiencies are described in the following 8 enumerations of "failures" in the application.

1. Failure to account for management of all phosphorus production.

Table 5.1 p.18 of the application indicates that the total phosphorus produced by the proposed 999 cows is 389 lb/day P_2O_5. This is equivalent to 141,985 lb/yr P_2O_5 (389 x 365). This total annual phosphorus production of 141,985 lb/yr P_2O_5 is based on values in ASAE D384.2 MAR2005 (American Society of Agricultural and Biological Engineers). These values are based

on years of scholarly research and numerous sampling events. They have been updated and refined several times but have not changed markedly over the years. There has been no significant dispute of these values from the dairy industry and should, therefore, be considered reliable.

Tables 5.3a p.21 of the application and the NMP dated 12/11/06 indicate that the amount of wastewater to be irrigated totals 32.88 ac-ft/yr or 394.6 ac-in/yr. The NMP further indicates that, based on a lab analysis dated 03/31/2006, the wastewater contains 0.0042% P. Therefore, the nutrient availability from the wastewater is 8,628 lb/yr P_2O_5 (see Table 1 of the NMP). O-Kee Dairy plans to apply all of the wastewater to LMU# 1, 2, 4, 5, and 6.

Table 5.1 p.18 of the application and the form "Manure, Litter, and Wastewater Handing" (p.6) indicate that dry manure production is 3646 tons/yr. According to the NMP dated 12/11/06, a lab analysis dated 03/22/2006 indicated that the collected manure contained 53% moisture and 0.4061% P (on a dry basis). Therefore, the production of collected manure was estimated to be 7,757 wet tons/yr and the nutrient availability from this manure was calculated to be 67,813 lb/yr P_2O_5 (see Table 1 of the NMP). O-Kee Dairy plans to apply manure (775 wet tons/yr) containing 154 lb/ac/yr P_2O_5 (see Table 4 of the NMP) to LMU# 3 (44 ac) or a total of 6,776 lb/yr P_2O_5. The remainder of the manure (6,982 wet tons/yr) which is estimated to contain 61,037 lb/yr P205 is planned to be transferred to other persons.

In summary, of the 141,985 lb/yr P_2O_5 generated by the cows, 8,628 lb/yr P_2O_5 will be applied on-site as wastewater, 6,776 lb/yr P_2O_5 will be applied on-site as manure, and 61,037 lb/yr P_2O_5 will be transferred to other persons. *This leaves 65,544 lb/yr P_2O_5 or 46.2% of the annual phosphorus production unaccounted for.* It has apparently been assumed to simply disappear. Failure to plan for management of this unaccounted phosphorus will lead to excess and unmanaged phosphorus distribution within the watershed resulting in further degradation of water quality in the North Bosque River and Lake Waco.

The applicant and, therefore, the Executive Director is failing to account for almost half of the generated phosphorus from this facility. This can probably be attributed to several causes including failure to account for phosphorus in the lagoon sludge which must be disposed of and inaccurate/inadequate sampling of the wastewater and manure. Nevertheless, the failure to perform a simple mass balance on phosphorus at a dairy, especially if this is systematic to all permit applications in the North Bosque River watershed, will underestimate the amount of phosphorus being contributed to the watershed by a factor of two and will have dramatic adverse consequences in trying to reduce phosphorus in the watershed.

2. Failure to calculate the phosphorus index properly.

The NMPs submitted by the applicant to the Executive Director give maximum allowable solids application rates based on an incorrect phosphorus index calculation. The phosphorus index calculations are based on the organic phosphorus application rates that would occur at *planned* solids application rates, not on the organic phosphorus application rates that would actually occur at *maximum* solids application rates. The maximum solids application rates must be based on a phosphorus index corresponding to the actual organic phosphorus application rates that would occur at the maximum solids application rates, i.e., 103 lb/ac P_2O_5 on LMU #1, 103

lb/ac P_2O_5 on LMU #2, 83 lb/ac P_2O_5 on LMU #4, 83 lb/ac P_2O_5 on LMU #5, and 115 lb/ac P_2O_5 on LMU #6. The phosphorus index used in determining the maximum allowable solids application rates must be re-calculated using the correct organic phosphorus application rates.

The latest phosphorus index submitted to the Executive Director dated 11/15/06 indicates that waste will be placed deeper than 2 in. or broadcast and incorporated with 48 hours in all fields. However, LMU #3 is a coastal field and will be receiving solids. It seems unlikely that solids will be incorporated into an established coastal field unless some specialized equipment is being utilized. The applicant has not indicated that this will be the case. If incorporation occurs, the coastal field will be disrupted. This will result in significantly higher erosion, and the applicant has indicated in the phosphorus index that the erosion is very low. The phosphorus index should be corrected.

The remainder of the fields will receive wastewater. The guidelines for the phosphorus index indicate that wastewater may be considered to be incorporated, but only if the wastewater contains less than 2% solids. Currently, only total nitrogen, total phosphorus, and total potassium are required to be analyzed under Section VII.A.9(a). Total solids is not a required parameter. Total solids must be added to the required parameters for analysis to determine compliance with this incorporation assumption. This sample should be taken from the irrigation line during the actual application of wastewater when solids can be expected to be churned up from the lagoon and mixed with the effluent, not from a quiescent surface sample.

3. Failure to properly calculate application rates for LMUs #2, 3, 4, and 5 in the NMP.

According to Special Provision X.A.2(b) of the draft permit, LMUs 2&3 and LMUs 4&5 do not currently have established permanent grasses, and LMUs 4&5 may not have the proposed grasses established for up to three years. The crop requirements and crop removals for these fields are not the same as for proposed established grasses. Therefore, the values used in the NMP are incorrect as are the allowable application rates which are based on these values. The NMP must be revised to reflect the reduced application rates since the proposed crops in these fields have not yet been established.

4. Failure to properly calculate application rate for LMU #6 in the NMP.

According to the NMP dated 12/11/06, the crop and yield for LMU #6 is shown as "Native Grazing or Hay 1500#" which has a Nitrogen Crop Requirement of 20 lb/ac N and a Phosphorus Crop Requirement of 27 lb/ac P_2O_5. NRCS Code 590 requires that the application rate not exceed the Nitrogen Crop Requirement. However, the maximum application rate for LMU #6 is given as 221 lb/ac N and 114 lb/ac P_2O_5 (see Table 9). The Nitrogen Application Rate calculated in the NMP exceeds the allowable maximum application rate by over 10 times. Consequently, the allowable maximum phosphorus application rate should be reduced from 114 lb/ac P_2O_5 to 10 lb/ac P_2O_5 for LMU #6. This results in the planned application rates for the other LMUs shown in the NMP to be invalid because additional wastewater effluent must be irrigated on these LMUs. The NMP must be revised.

5. Failure to sample solids from settling basin and include in the NMP.

The facility has settling basins that collect runoff before it enters the RCSs. These settling basins will need to be cleaned out periodically. No data has been presented concerning the quantity and quality of the solids in these settling basins. The NMP must include disposal of these solids or it is invalid. Since the phosphorus concentration of these solids will be significantly different than that used in the manure calculation in the NMP, a separate calculation must be made on the application or disposal of the settled solids. The NMP should be revised to include the settled solids.

6. Failure to calculate realistic runoff amounts in the water balance.

The applicant is converting 24-hour Runoff Curve Numbers to 30-day Runoff Curve Numbers based on information in Texas Engineering Technical Note No. 210-18-TX3. In doing so, the Water Balance Model provided in Table 5.3a of the permit application predicts that only 2.2% of the precipitation that falls on the fields will runoff. Further, it indicates that there will be no runoff at all during the months of January, February, March, July, August, November, and December. Clearly, this is ridiculous and bears no semblance to reality. The Technical Note cited was developed for a reservoir operation study and obviously has serious shortcomings for small watersheds. Utilizing the current approach is useless in preparing a meaningful water balance. The Executive Director should not accept such a flawed water balance. A more realistic approach needs to be developed.

The applicant also uses the 30-day runoff curve numbers to calculate the amount of runoff from the open lots and adjacent areas. The resulting calculations show that the monthly runoff values range between 15 to 47% of the total precipitation in the open lot areas and 4 to 31% of the total precipitation in the adjacent areas. These are unreasonably low values. Even if Technical Note 210-18-TX3 were applicable to small areas (and it appears to have serious shortcomings), the runoff calculations for runoff during the 25-year 10-day event would require use of the 10-day runoff curve numbers rather than 30-day runoff curve numbers since 10 days is the period of time in which the rainfall would occur. There is no justification for using 30-day runoff curve numbers in calculating runoff from 10-day events.

7. Failure to properly calculate agronomic rates.

Even if all of the problems in the NMP cited previously were addressed, the basic methodology being utilized to calculate agronomic rates is flawed because the NMP fails to account for the nutrients available to plants in the root zone to satisfy the crop requirement. Instead, application of the annual crop requirement is allowed regardless of the actual soil nutrient content until the soil reaches a concentration of 200 ppm P. Even then, continued application of nutrients is allowed even though there is more than three times the amount of nutrients necessary for optimum growth.

The Executive Director more properly makes the agronomic rate calculations when determining agronomic rates for the application of biosolids. For biosolids permit applications, the TCEQ requires that the agronomic rate calculations take into account the nutrients in the soil by taking the crop requirement and subtracting the nutrients available in both the 0-6" and 6-24"

soil depths for the most recent year. Only the amount of nutrients needed to satisfy the overall crop requirement for that year is allowed to be applied. If the amount of nutrients in the soil exceeds the crop requirement, no additional nutrients can be added during that year. The nutrients in biosolids are not fundamentally any different than the nutrients in dairy waste. There is no reason that the Executive Director should calculate the agronomic rate differently for CAFO permits. CAFO permits, including this one, should only allow application of only that quantity of nutrients that will benefit optimum crop production.

8. Failure to utilize correct, complete, and certified NMP.

According to Section VII.A.8(a) of the draft permit, the certified NMP dated July 21, 2006 is to be implemented upon issuance of the permit. However, in reviewing the TCEQ files, at least thirteen (13) additional NMPs, partial NMPs, or individual pages have been submitted to the TCEQ since that time (26 Jul 2006, 02 Aug 2006, 29 Aug 2006, 07 Sep 2006, 08 Sep 2006, 12 Sep 2006, 13 Oct 2006, 30 Oct 2006, 06 Nov 2006, 15 Nov 2006, 11 Dec 2006, 15 Dec 2006, and 21 Dec 2006), some in response to NODs from the TCEQ and not all of them certified. It is difficult to know upon which NMP or portions of NMPs that the TCEQ has based its draft permit though presumably the more recent submittals were part of the basis. It impossible to properly review the proposed permit without having a complete and certified NMP based on the most recent submittals to the TCEQ. A complete and certified NMP should be submitted to the TCEQ with each page displaying the same date. Section VII.A.8(a) of the permit should be corrected to reflect the most recent certified NMP.

VI. Numerous technical provisions in the draft permit are so defective that the permit cannot attain the phosphorus TMDLs for the North Bosque River, the state water quality standards, and the requirements for CAFOs in Subchapter B.

These technical permit deficiencies are described in the following 9 enumerations of "failures" in the draft permit.

1. Failure to adequately monitor lagoon sludge volume.

Although the permit application requires certification of the total lagoon capacity at the time the lagoon was constructed, neither the permit application nor the draft permit requires that existing lagoons be certified with respect to the existing sludge volume. The permit does not require measurement of the sludge volume in the existing lagoons until three years after the date of permit issuance. There is no requirement to verify that there is <u>any</u> sludge volume currently available in the existing lagoons, much less sufficient volume to hold three years of sludge. If there is sufficient cause to determine the sludge volume three years after this permit is issued, there is certainly sufficient cause to determine the existing sludge volume at the time of permit issuance since it has been over five years since the existing permit was issued.

Measuring the sludge volume every two to three years might be acceptable if the sludge volume was measured initially and most of the manure and phosphorus were accounted for in the mass balance. However, since 46.2% of the annual manure and phosphorus loading generated by the cows is unaccounted for, waiting until after the third year to measure the sludge volume is unacceptable. The sludge volume in the lagoons should be measured annually to confirm that the

sludge cleanout schedule is adequate because, presumably, much of the unaccounted manure and phosphorus will be deposited as sludge in the lagoons causing the sludge volume to be exceeded long before predicted.

2. Failure to perform adequate sampling of wastewater and manure.

Only one annual sample is required to be collected for wastewater and for manure (one for wastewater and one for manure). The entire NMP is based on these single annual samples. The Subchapter B rules require a minimum of one annual sample, and if the overall mass balance of manure accounted for all of the phosphorus, this might be acceptable. However, 46.2% of the manure and phosphorus is unaccounted for. Clearly, there is reason to suspect that these single samples are not representative of the wastewater and the manure on an annual basis. These single samples, if not representative, could and probably do drastically underestimate phosphorus loading to a field. Wastewater is typically sampled from the surface of lagoons. However, when the irrigation pumps in the lagoons are operating, sludge in the bottom of the lagoons is agitated and becomes mixed with the wastewater. This sludge agitation has often been cited by the dairies as a reason that sludge removal may not be needed as often as predicted. Since this sludge contains high levels of phosphorus, the wastewater that is actually being used to irrigate the fields contains much higher levels of phosphorus than is measured in the single annual surface sample. This invalidates the assumptions used in the NMP. Additionally, the concentration of phosphorus in the lagoon varies according to the antecedent rainfall or drought conditions which may cause varying degrees of dilution or concentration. Lagoon samples should be taken much more often (preferably at least once during each irrigation event) and should be obtained from the irrigation pipeline following the pump rather than from the surface of the lagoon. Similar problems arise with the manure and more than one annual sample of the manure should be performed (preferably one each month or one from each transport event).

3. Failure to remove 50% of the collectible manure from the watershed as recommended by the TMDL.

The TMDL for the North Bosque watershed recommends removal of 50% of the collectible manure in order to meet the water quality goals. Based on the CDM Erath County Animal Waste Management Study performed for BRA in September 1998 and the SWAT modeling that was done in support of this TMDL, 38.1% of the total manure production was assumed to be removed from the watershed. For the proposed O-Kee Dairy permit, 53,954 lb/yr P_2O_5 would need to be removed from the watershed (or sent to composting).

Although listed as one of a number of possible options, there is no indication that any of the manure transferred to other persons will be sent to composting or out of the watershed. This means that 61,037 lb/yr P_2O_5 will be potentially managed on third party fields within the watershed, *even after excluding the 65,544 lb/yr P_2O_5 that is unaccounted for.* If all of the 61,037 lb/yr P_2O_5 from this manure is applied to third-party fields in the watershed with soil concentrations less than 151 ppm P, approximately 300 to 400 additional acres (assuming 3-cut coastal) will have phosphorus applied at application rates ranging between the nitrogen crop requirement rate and 2 times the crop phosphorus removal rate. This will result in an increase of the soil P in these additional acres of from 16 to 24 ppm per year. The cumulative impact will be

enormous. Additionally, these additional acres will be virtually unseen (and hence unregulated) by TCEQ inspectors.

4. Failure to prevent increasing phosphorus in runoff.

The modeling done to support the TMDL was based in part on reducing phosphorus application rates on waste application fields. According to the 12/11/06 NMP, this dairy would be allowed to apply up to 30,787 lb/yr P_2O_5 to its six LMUs. The total uptake of phosphorus from these fields based on the proposed crops and crop yields is 9,269 lb/yr P_2O_5. So, this dairy would be allowed to apply phosphorus at 3.3 times the removal rate. Nothing in the permit prevents this. The dairy indicates that it initially plans to only apply 15,482 lb/yr P_2O_5 to its LMUs (this is still 1.7 times the removal rate). However, the NMP and planned application rates could be changed by the dairy the day after the permit is issued without any review from the TCEQ or the public. Whether the allowable maximum rates or the ephemeral planned rates are utilized, the phosphorus application rates will exceed the removal rates, and the phosphorus concentrations in these fields will continue to rise and will contribute nothing to reducing the phosphorus in the watershed. The phosphorus in runoff from these fields will continue to increase.

5. Failure to prohibit waste and wastewater application to fields exceeding 200 ppm P.

The North Bosque River TMDL Implementation Plan dated December 2002 (p.16) states that formal enforcement action will result if CAFOs "apply waste or wastewater to a WAF that has been documented to have exceeded 200 parts per million phosphorus in Zone 1 of the soil horizon." Section VII.A.8(c)(2) of the draft permit negates this enforcement action by allowing application to continue as long a NUP has been prepared and approved by the TCEQ. Soil phosphorus concentrations can continue to rise as long as they do not exceed 500 ppm. Even above 500 ppm, application can continue as long as the NUP contains a phosphorus reduction component. Application of waste and wastewater to fields in excess of 200 ppm (and especially 500 ppm) should be prohibited in order to be consistent with the language of the TMDL.

6. Failure to require a phosphorus reduction component when fields exceed 200 ppm P.

Section VII.A.8(c)(1)(ii) of the draft permit allows a NUP to be prepared that does not contain a phosphorus reduction component for fields containing between 200 and 500 ppm P as long as the NUP is certified by a person listed in Section VII.A.8(c)(3). If application is not going to be prohibited on fields exceeding 200 ppm P, the NUPs should at least be required to contain a phosphorus reduction component before they can be approved.

7. Failure to adequately regulate and monitor third-party fields.

Section VII.A.8(e)(5)(i)(F) of the draft permit requires soil tests to be performed on third-party fields after waste has been applied (within 12 months of any previous application). However, it does not require any initial sampling prior to applying waste. As a result, one-time application of wastes can occur on third-party fields with no way to determine if the application

rates were within the required limits. Initial soil sampling should be required prior to application of waste as well as the year following application.

The phrase "not to exceed the nitrogen application rate" in section VII.A.8(e)(5)(i)(c) of the draft permit is ambiguous at best and probably totally meaningless. It does not define the meaning of the term "nitrogen application rate." This rate could mean any rate at which the nitrogen is applied. Presumably, it is meant to be either the nitrogen crop requirement rate or the nitrogen crop removal rate. To be consistent with the subsequent paragraphs which base the application rate on crop removal, this phrase should be restated as "not to exceed the nitrogen crop removal rate".

The language in Sections VII.A.8(e)(5)(i)(D-E) of the draft permit is in error or at the very least ambiguous. The soil phosphorus concentrations of 50, 51, 150, and 151 have effectively been excluded from regulation. This language needs to be rewritten to include these values by using "less than or equal" and/or "inclusively" phraseology.

The language in Sections VII.A.8(e)(5)(i)(D-E) of the draft permit needs to also include a statement that the application rate is not to exceed the annual nitrogen crop removal rate if it is more restrictive.

The language in Sections VII.A.8(e)(5)(i)(C-E) of the draft permit needs to also include a statement that the application rate is not to exceed the requirements of Code 590. Although more restrictive in many instances, it is possible for third-party fields to meet the requirements of Sections VII.A.8(e)(5)(i)(C-E) and fail to meet the requirements of NRCS Code 590. For example, Code 590 requires that the application rate not exceed the annual crop P requirement in fields with a P-Index rated of "Very High." Section VII.A.8(e)(5)(i)(c) allows the nitrogen crop requirement rate if the field is less than 50 ppm irrespective of the P-Index. Adherence to NRCS Code 590 should be required if it is more restrictive.

According to Section VII.A.8(e)(5)(i)(A) of the draft permit, no NMP is required for third-party fields. Without preparing an NMP, the requirements of Sections VII.A.8(e)(5)(i)(C-E) cannot be met since an NMP is the planning tool that is necessary to determine the appropriate application rates. An NMP should be required.

According to Section VII.A.8(e)(5)(i)(A) of the draft permit, no NUP is required for third-party fields (if the soil P exceeds 200 ppm). Therefore, if waste is applied at a rate that causes the field to exceed 200 ppm P, there is no requirement for a plan to reduce phosphorus. A NUP should be required if waste application causes a field to exceed 200 ppm P.

Section VII.A.8(e)(5) of the draft permit needs to include a requirement that records of crops and crop yields be submitted to the TCEQ. Otherwise, the phosphorus crop removal rates cannot be calculated and compliance with the phosphorus application rate limitations cannot be determined.

8. Failure to prepare a nutrient management plan for the term of the permit.

The NMP provided in the proposed permit addresses only the first year of the permit. It fails to address the subsequent years of the five-year permit term. By doing so, it fails to show the impacts of 1) the changing application rates as a result of establishing permanent grass crops, 2) the increasing soil phosphorus levels which impact the phosphorus index and subsequent allowable application rates, and 3) the application of lagoon and settling pond solids that will be required during the term of this permit. An NMP should be prepared that shows the impacts of all nutrient management issues over the five-year permit term and whether the operation is sustainable. The permit should establish maximum annual application rates that allow the facility to operate in a sustainable manner over the five-year term of the permit.

9. Failure to provide a meaningful definition of vegetative buffers.

Section X.F of the draft permit requires that the permittee install and maintain buffers according to NRCS standards. While the NRCS does have practice standards for "filter strips" (Code 393), the NRCS has no practice standards for "vegetative buffers." The buffers specified in the permit contain both "filter strips" and "vegetative buffer setbacks". Without a definition and standard for "vegetative buffer", the term is virtually meaningless. A single tree in the buffer area could be considered a "vegetative buffer." Since the NRCS does not have a standard for "vegetative buffer", the TCEQ must provide one in the permit. Alternately, the TCEQ could simply require that all "vegetative buffers" meet the same standard as "filter strips" in NRCS Code 393.

The requirement for "Temporary Filter Strips" is ambiguous. For example, LMUs #4 and #5 have a requirement for 100 feet of vegetative buffer, 33 feet of filter strip, and an additional temporary filter strip of 150 feet. This seems to indicate a need for 100 feet of vegetative buffer and 183 feet of filter strip during the "temporary" period. However, the map in Attachment B of the permit does not seem to reflect this interpretation. The footnote is not particularly helpful as the meaning of the footnote is not clear especially since two of the LMUs have different permanent filter strip requirements (28 feet and 33 feet). The footnote simply reads "133 to 150 feet total". Either the map needs to be changed or the table in Section X.F changed.

It is not clear where the measurement of the vegetative buffers and filter strips begin in relation to the streambed. The language should specify that the measurement is from the banks of the stream, not the centerline. The applicant should also be required to mark the boundary between the application area and the buffer in order to allow adequate enforcement.

REQUEST FOR PUBLIC MEETING

The City hereby requests that a public meeting be held within the City of Waco on O-Kee Dairy's draft permit for major amendment of Permit No. 4108, in order to better inform the City, its residents, downstream landowners, and all users of Lake Waco, and other members of the public regarding the proposed expansion of this dairy and the effects that it would have on the North Bosque River, Lake Waco, and all persons who use and enjoy them, and in order to obtain further public input to assist the TCEQ in its decision. The City requests that the public comment period be extended to the close of the public meeting.

CONCLUSION

The City of Waco, on its own behalf and as *parens patriae* on behalf of its citizens, hereby requests the Executive Director to take the following actions:

1. Consider these comments in evaluating the draft permit by which the Executive Director has proposed to authorize the expansion of O-Kee Dairy;

2. Rescind the draft permit issued for O-Kee Dairy as without valid legal and technical basis; and

3. Hold a public meeting on the application for major amendment of TPDES Permit No. WQ0004108000, at a time and place that is convenient to the City, its residents, its state representatives, and to other local public officials and persons affected by the proposed expansion of this dairy.

The City appreciates very much the opportunity to submit these comments and the consideration that it knows the Executive Director and staff will give to them.

Respectfully submitted,

BROWN McCARROLL, L.L.P.
111 Congress Avenue
Suite 1400
Austin, Texas 78701
(512) 472-5456
(512) 479-1101 – Fax

By _____
Jackson Battle

Attorneys for the City of Waco

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Waco, Texas 76702-2570

Miguel Flores
Director, Water Quality Protection Division
U.S. EPA Region 6
1445 Ross Avenue, Suite 1200
Mail Code 6WQ
Dallas, Texas 75202-2733

ATTACHMENT 1 (to Comments by City of Waco)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

DEC 03 2001

Mr. Jeffrey A. Saitas, P.E.
Executive Director
Texas Natural Resource Conservation Commission
P.O. Box 13087
Austin, Texas 78711-3087

Dear Mr. Saitas:

The Environmental Protection Agency (EPA) reviewed the final document *"Two Total Maximum Daily Loads for Phosphorus in the North Bosque River–for Segments 1226 and 1255"* submitted by the Texas Natural Resource Conservation Commission (TNRCC) on March 5, 2001. Based on this review, EPA requested supplemental supporting information, which was furnished by TNRCC.

This letter defines EPA's understanding of these total maximum daily loads (TMDLs) based on our review of the submitted TMDL document, modeling information, and the supplemental information provided by TNRCC. Table 1 summarizes the actual TMDLs, including waste load allocations (WLAs), load allocations (LAs), allowance for future growth (FG), and an implicit margin of safety (MOS). EPA recognizes that this TMDL modeling information represents "net" TMDL values at the five river index stations and therefore, the non-point source LAs are net loading values while WLAs are expressed as "gross" loads. It would be consistent with these TMDLs to express the net LA value as a gross LA value for the purpose of developing nonpoint load reductions.

Table 2 includes a scenario for individual WLAs for soluble reactive phosphorus. These WLAs were calculated from the TMDL document, modeling scenario information obtained directly from the Blacklands Agricultural Research Center, and the supplemental information provided by TNRCC. As established in the August 14, 2001, TMDL process agreement between EPA and TNRCC, these individual WLAs may be different from actual effluent limits established as a part of the Texas Pollutant Discharge Elimination System permitting process, and TNRCC will document how actual permit limitations are consistent with these TMDLs.

We request that TNRCC review and provide written concurrence with our interpretations of the enclosed tables. As you are aware, in May 2001, EPA Region 6 held listening sessions with key stakeholders of the North Bosque River Watershed, including cities, dairymen, and environmental groups. The results of these sessions revealed a number of key issues that I feel need further study. My staff and I have shared this information with you and your staff. We

look forward to working with you and your staff to complete the review process for the North Bosque River TMDLs. If further discussion is required, please contact me or have your staff contact Sam Becker at (214) 665-8133.

Sincerely,

Gregg A. Cooke
Regional Administrator

Enclosure

TABLE 1-North Bosque River TMDL (Segments 1226 and 1255) for Soluble Reactive Phosphorus (SRP)

Column	1	2	3	4	5	6
River Index Stations	TMDL - e for SRP (lbs/day)	LA for SRP (lbs/day)	WLA for SRP (lbs/day)	FG for SRP (lbs/day)	MOS for SRP (lbs/day)	Comments
Above Stephenville	9.34	9.34	0.000	0.00	Implicit	No PS discharge
Below Stephenville	25.18	0.94	24.24	0.00	Implicit	Stephenville discharge
Above Meridian	63.23	34.92	27.06	1.25	Implicit	Stephenville, Hico, and Iredell discharges
Clifton	93.52	61.29	30.98	1.25	Implicit	Stephenville, Hico, Iredell, & Meridian discharges
Valley Mills	106.35	69.78	35.32	1.25	Implicit	Stephenville, Hico, Iredell, Meridian, & Clifton discharges
End of Segment 1226	>106.35	>69.78	37.57	0.00	Implicit	Stephenville, Hico, Iredell, Meridian, Clifton, & Valley Mills discharges

TMDL (Total Maximum Daily Load), WLA (Wasteload Allocation), LA (Load Allocation), FG (Future Growth), MOS (Margin of Safety)

1 Represents net TMDL, which is equivalent to stream loading capacity for the "existing" scenario and incorporates best management practices (BMPs) for waste application fields (WAFs) and wastewater treatment plants (WWTPs). Represents anticipated in-stream effect at the five river index stations, which are the compliance points for the mainstem of the North Bosque River Segments 1226 and 1255.

2 LA at a given river index station is equal to the sum of all nonpoint sources at or above that location with the exception of manure/wastewater holding lagoons. LA allocation does not include any allocations for manure/wastewater holding lagoons.

3 WLA at a given river index station is equal to the sum of all individual point source dischargers at or above that location. For example, at river index station "Above Meridian" the WLA (27.06 lbs/day) = WLA for Stephenville (24.24 lbs/day) + WLA for Hico (2.30 lbs/day) + WLA for Iredell (0.52 lbs/day). These individual WLAs are presented in Table 2.

4 FG at a given river index station is allocated between that location and the one above it. For example, at "Above Meridian" the FG (1.25 lbs/day) is allocated between "Below Stephenville" and "Above Meridian."

5 MOS is based on conservative assumptions and is implicit for this TMDL.

6 These dischargers are located at or above the five river index stations.

TABLE 2- North Bosque River Intial Wasteload Allocations (WLAs) for Soluble Reactive Phosphorus (SRP)

City/Town	Segment Number	Design Flow (MGD)	Individual Point Source Concentrations (ug/l)	Individual Point Source WLA (lbs/day)
Stephenville	1255	3.00	969.00	24.24
Hico	1226	0.20	1378.00	2.30
Iredell	1226	0.05	1244.00	0.52
Meredian	1226	0.45	1045.00	3.92
Clifton (new)	1226	0.65	801.00	4.34
Valley Mills	1226	0.36	748.00	2.25
Future Growth (FG)	1226	0.60	750.00	3.75
TOTAL		**5.31**		**41.32**

#1

TCEQ Public Participation Form
Jewel Alt and Oene Keuning
Public Meeting
Proposed Amendment to Water Quality Permit No. WQ0004108000
Monday, April 16, 2007

PLEASE PRINT:

Name: John Cowan

Address: 3500 William D. Tate Ave Ste 100

City/State: Grapevine TX Zip: 76051

Phone: (817) 410-4540

☑ Please add me to the mailing list.

Are you here today representing a municipality, legislator, agency, or group? ☐ Yes ☐ No

If yes, which one? _____

IF YOU WANT TO GIVE FORMAL COMMENT PLEASE ✓BELOW

☑ I wish to provide formal oral comments.

☐ I wish to provide formal written comments at tonight's public meeting.

(Written comments may be submitted any time during the meeting.)

Please give this to the person at the information table. Thank you.

#4

TCEQ Public Participation Form
Jewel Alt and Oene Keuning
Public Meeting
Proposed Amendment to Water Quality Permit No. WQ0004108000
Monday, April 16, 2007

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
2007 APR 18 AM 9:08
CHIEF CLERKS OFFICE

PLEASE PRINT:

Name: Danny Glossup

Address: 801 Cottonwood CT

City/State: Stephenville TX Zip: 76401

Phone: (254) 967-5727

☑ Please add me to the mailing list.

Are you here today representing a municipality, legislator, agency, or group? ☑ Yes ☐ No

If yes, which one? Dairy Farmers of America

IF YOU WANT TO GIVE FORMAL COMMENT PLEASE ✓BELOW

☑ I wish to provide formal oral comments.

☐ I wish to provide formal written comments at tonight's public meeting.

(Written comments may be submitted any time during the meeting.)

Please give this to the person at the information table. Thank you.

#2

TCEQ Public Participation Form
Jewel Alt and Oene Keuning
Public Meeting
Proposed Amendment to Water Quality Permit No. WQ0004108000
Monday, April 16, 2007

PLEASE PRINT:

Name: Kerry Haliburton

Address: P.O. Box 1470

City/State: Waco, TX Zip: 76703

Phone: (254) 755-4100

☐ Please add me to the mailing list.

Are you here today representing a municipality, legislator, agency, or group? ☑ Yes ☐ No

If yes, which one? City of Waco

IF YOU WANT TO GIVE FORMAL COMMENT PLEASE ✓BELOW

☑ I wish to provide formal oral comments.

☐ I wish to provide formal written comments at tonight's public meeting.

(Written comments may be submitted any time during the meeting.)

Please give this to the person at the information table. Thank you.

mw

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

FEB 12 2007

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (7004 1160 0003 0354 7267)

AGR
55254

Mr. Chris Linendoll, E.I.T., Manager
Wastewater Permitting Section (MC-148)
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
2007 FEB 21 PM 2:48
CHIEF CLERKS OFFICE

OPA
FEB 22 2007
BY

Re: No Objection
TPDES Permit No. TX0128619
Texas State Permit No. 04108
O-Kee Dairy
Hico, TX 76457

Dear Mr. Linendoll:

Thank you for the opportunity to review the draft proposed permit transmitted in the letter from Mr. Charles Maguire (TCEQ) to Ms. Evelyn Rosborough (EPA) dated December 22, 2006, and received on December 27, 2006. As a result of our review, we conclude that the draft proposed permit appears to conform to the guidelines and requirements of the Clean Water Act. Therefore, EPA has no objection to this draft permit.

Thank you for your cooperation. If I may be of assistance in helping your office achieve its permitting goals, please call me at 214-665-7170 or have your staff contact Kilty Baskin at VOICE:214-665-7500, FAX:214-665-2191, or EMAIL:baskin.kilty@epa.gov.

Sincerely yours,

Claudia V. Hosch

Claudia V. Hosch
Chief
NPDES Permits Branch

cc: Mr. Bill Ross, Land Application Team
Wastewater Permitting Section (MC 148)
TCEQ
P.O. Box 13087
Austin, Texas 78711-3087

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

FEB 12 2007

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (7004 1160 0003 0354 7267)

Mr. Chris Linendoll, E.I.T., Manager
Wastewater Permitting Section (MC-148)
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Re: No Objection
TPDES Permit No. TX0128619
Texas State Permit No. 04108
O-Kee Dairy
Hico, TX 76457

Dear Mr. Linendoll:

Thank you for the opportunity to review the draft proposed permit transmitted in the letter from Mr. Charles Maguire (TCEQ) to Ms. Evelyn Rosborough (EPA) dated December 22, 2006, and received on December 27, 2006. As a result of our review, we conclude that the draft proposed permit appears to conform to the guidelines and requirements of the Clean Water Act. Therefore, EPA has no objection to this draft permit.

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Sincerely yours,

Claudia V. Hosch

Claudia V. Hosch
Chief
NPDES Permits Branch

cc: Mr. Bill Ross, Land Application Team
Wastewater Permitting Section (MC 148)
TCEQ
P.O. Box 13087
Austin, Texas 78711-3087

#7

TCEQ Public Participation Form
Jewel Alt and Oene Keuning
Public Meeting
Proposed Amendment to Water Quality Permit No. WQ0004108000
Monday, April 16, 2007

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
2007 APR 13 AM 9:08
CHIEF CLERKS OFFICE

PLEASE PRINT:

Name: Lonnie & Kaye Lewis ← only she spoke

Address: 5245 CR 207

City/State: Dico Zip: 76457

Phone: (254) 796-4680

☐ Please add me to the mailing list.

Are you here today representing a municipality, legislator, agency, or group? ☐ Yes ☑ No

If yes, which one?_____

IF YOU WANT TO GIVE FORMAL COMMENT PLEASE ✓BELOW

☐ I wish to provide formal oral comments.

☐ I wish to provide formal written comments at tonight's public meeting.

(Written comments may be submitted any time during the meeting.)

Flies -

Please give this to the person at the information table. Thank you.

#6

TCEQ Public Participation Form
Jewel Alt and Oene Keuning
Public Meeting
Proposed Amendment to Water Quality Permit No. WQ0004108000
Monday, April 16, 2007

PLEASE PRINT:

Name: Mac Ricketts

Address: Box 536

City/State: Comanche Zip: TX

Phone: (915 356-3343

☑ Please add me to the mailing list.

Are you here today representing a municipality, legislator, agency, or group? ☑ Yes ☐ No

If yes, which one? IAD

IF YOU WANT TO GIVE FORMAL COMMENT PLEASE ✓BELOW

☑ I wish to provide formal oral comments.

☒ I wish to provide formal written comments at tonight's public meeting.

(Written comments may be submitted any time during the meeting.)

Please give this to the person at the information table. Thank you.

mw

TCEQ:

MR DAVE KOENING IS
AN EXEMPLARY EXAMPLE
OF GOOD WASTE MGMT

MAC RICKELS
BOX 536
COMANCHE
TX
76442

mw

#3

TCEQ Public Participation Form
Jewel Alt and Oene Keuning
Public Meeting
Proposed Amendment to Water Quality Permit No. WQ0004108000
Monday, April 16, 2007

PLEASE PRINT:

Name: PETE Schouten

Address: 3728 CR 229

City/State: Hico TX Zip: 76457

Phone: (254) 965-2414

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
2007 APR 18 AM 9:08
CHIEF CLERKS OFFICE

☑ Please add me to the mailing list.

Are you here today representing a municipality, legislator, agency, or group? ☒ Yes ☐ No

If yes, which one? TAD

IF YOU WANT TO GIVE FORMAL COMMENT PLEASE ✓BELOW

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(Written comments may be submitted any time during the meeting.)

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#5

TCEQ Public Participation Form
Jewel Alt and Oene Keuning
Public Meeting
Proposed Amendment to Water Quality Permit No. WQ0004108000
Monday, April 16, 2007

PLEASE PRINT:

Name: Bob Whitney

Address: 1732 Hwy 2247

City/State: Comanche TX Zip: 76442

Phone: (325 356-5905

2007 APR 18 AM 9:08
CHIEF CLERKS OFFICE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

☐ Please add me to the mailing list.

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mw